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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/926,487	01/25/2002	Toshio Yamagiwa	107348-00178	5676

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EXAMINER

FISCHER, JUSTIN R

ART UNIT

PAPER NUMBER

1733

DATE MAILED: 12/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/926,487

Applicant(s)

YAMAGIWA, TOSHIO

Examiner

Justin R Fischer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In each of the aforementioned claims, the language "anti-sticking properties" is used to define the liner materials. It is unclear exactly what defines the liner materials as having "anti-sticking properties" and as such, the claims fail to provide a clear and concise understanding of the claimed invention. It is noted that the original disclosure includes a single embodiment in which the inner liner is formed of butyl rubber and the outer liner is formed of natural rubber. Is the language "anti-sticking properties" being used to define this combination of materials solely or is such a property inherently present when different formulations are used in the respective liners? Applicant is asked to clarify the intended meaning of "anti-sticking" properties without the introduction of new matter.

Also regarding claims 1-4, it is suggested that applicant define the relevant liners as being directly fastened to respective tire components when proper. For example, in claim 1, the language "inner liner...fastened to the inner surface of a side wall" does not positively require that the inner liner and the sidewall directly contact as appears to be the case from the original disclosure (Figure 1). This language does not provide a clear and concise understanding of the claimed invention. It is suggested that the language

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"directly fastened" is incorporated into the claim (support for such language is found in Figure 1).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chemizard (US 4,286,643) and further in view of Laube (US 5,426,147). As best depicted in Figure 1, Chemizard teaches a sealant-containing, pneumatic tire construction comprising an outer liner (6, 21) fastened to the inner surface of the tread and an inner liner (5) fastened to the inner surface of a sidewall of the tire body, wherein a sealant composition is arranged within the boundaries defined by the inner and outer liners. While Chemizard fails to expressly describe the outer and inner liners as being formed of "anti-sticking" properties, one of ordinary skill in the art at the time of the invention would have found it obvious to form the liners of Chemizard in accordance to the limitations of the claimed invention as they define common and well known liner compositions. It is noted that the inner liner of Chemizard is suggested as being formed of an airtight rubber (Column 1, Lines 50-55)- one of ordinary skill in the art at the time of the invention would have recognized butyl rubber as being the most common "airtight rubber", as shown for example by Laube (Column 1, Lines 10-20), it being further noted that butyl rubber is the suggested inner liner material by the claimed invention.

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Regarding the outer liner, it is extremely well known in the tire industry that natural rubber is used to form a plurality of tire components and in particular, it is commonly used when improved adhesion is desired, as would be the case in Chemizard (e.g. it is necessary to provide large degree of adhesion between outer liner and tire body). In this instance, the outer liner of the claimed invention is defined as being natural rubber. Thus, one of ordinary skill in the art at the time of the invention would have found it obvious to form the inner and outer liner of Chemizard from formulations having "anti-sticking" properties. Also, regarding the "anti-sticking" properties, it is clearly evident that additional compositions having "anti-sticking" properties would have been within the purview of one of ordinary skill in the art at the time of the invention.

Regarding claim 2, it is extremely well known in the tire industry to use a mixture of rubber compounds to form the tire body. In particular, natural rubber, butyl rubber, and acrylonitrile rubber are well known rubber compounds that are extensively used in the tire industry. It would have been within the purview of one of ordinary skill in the art at the time of the invention to select the appropriate mixture depending on the desired mechanical properties and thus the intended use of the tire. It is emphasized that each of the claimed mixtures would have been obvious to one of ordinary skill in the art at the time of the invention in view of their extensive use in the tire industry absent any conclusive showing of unexpected results.

5. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sweet (US 3,048,509) and further in view of Laube. As best depicted in Figures 2 and 3, Sweet is directed to a sealant-containing tire comprising an outer liner (1 or 4) that is

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fastened to the inner surface of a sidewall of the tire body and an inner liner (9) that is existent inward of said outer liner and is arranged from bead region to bead region (Column 3, Lines 30-35). As to the formulations of each of the liners, one of ordinary skill in the art at the time of the invention would have found it obvious to select materials having "anti-sticking" characteristics since such materials are extensively used in the tire industry. Regarding the inner liner, it is extremely well known that formulations demonstrating low air permeability are used and furthermore, butyl rubbers in particular are one of the most used innerliner compositions due to their air impermeable, as shown for example by Laube (Column 1, Lines 10-20). As to the outer liners, natural rubber is conventionally used in the manufacture of a wide variety of tire components, especially when a high degree of adhesion (increased tack) is desired. One of ordinary skill in the art at the time of the invention would have found it obvious to use natural rubber in the outer liner in view of the extensive use of such compounds in similar tire components and the recognized benefits of adhesion that are desired in this region of the tire. It is noted that this combination of materials is described by the applicant as defining "anti-sticking" properties- it is clearly, evident, though, that additional compositions would satisfy the desired anti-sticking properties of the claimed invention and would have been within the purview of one of ordinary skill in the art at the time of the invention.

As to claim 4, the first outer liner (6) of Sweet is fastened to the inner surface of the tread, the second outer liner (4) of Sweet is fastened to the inner surface of the

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sidewall, and the inner liner (1) has left and right ends fastened to the inner surface of the second outer liner.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kaneko (JO 61229604), Chautard (US 4,239,076), Hoshikawa (US 4,057,090), Emerson (US 3,903,947), and Igarashi (EP 0893236) are all directed to sealant-containing tires in which multiple layers are used to define the innerliner region and a chamber in which said sealant is disposed.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Justin R Fischer** whose telephone number is **(703) 605-4397** (if after December 18, 2003, (571) 272-1215). The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (703) 308-3853. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Justin Fischer

December 2, 2003



JEFF H. AFTERGUT
PRIMARY EXAMINER
GROUP 1300